

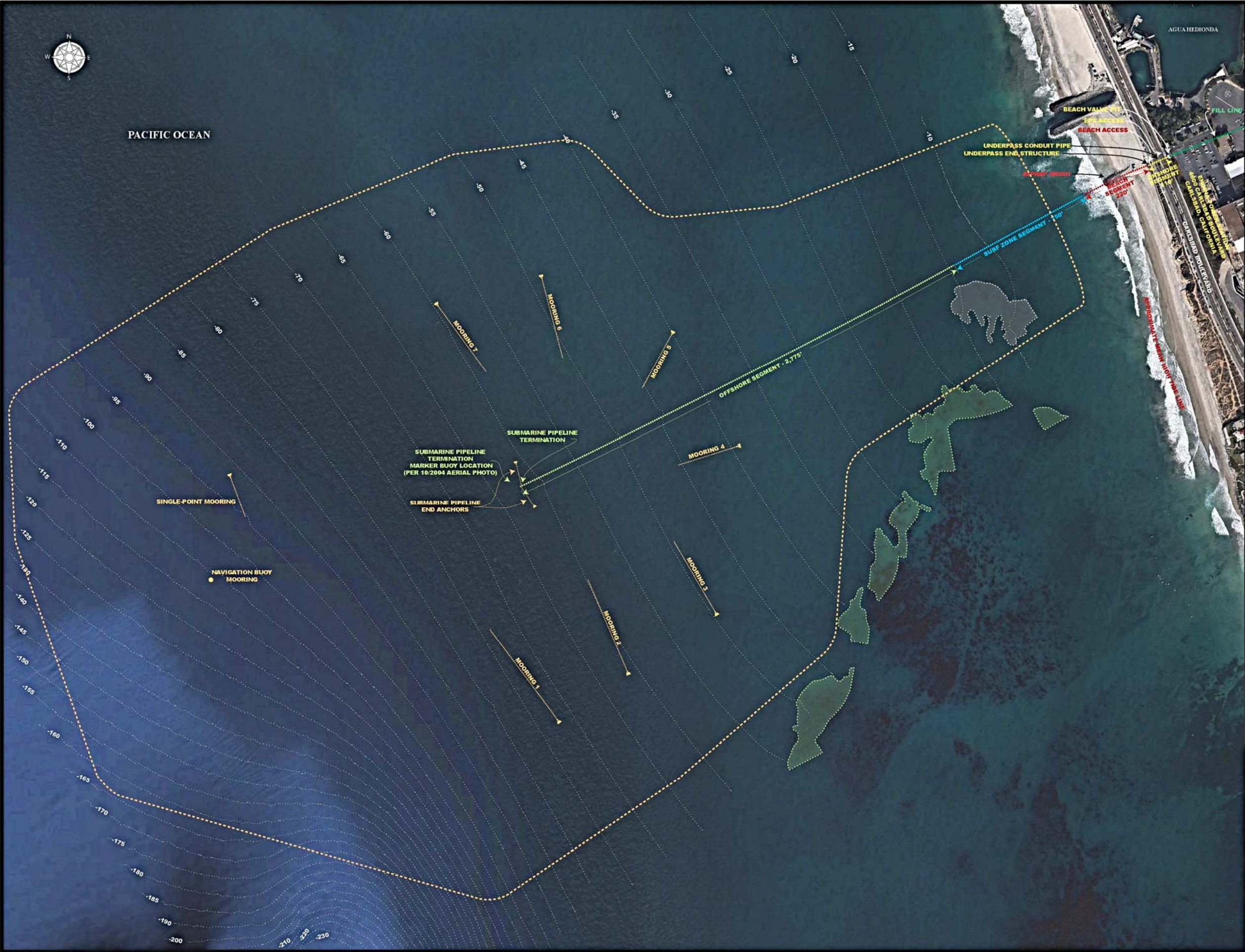
Appendix A Project Description Support Exhibits

A1 – 11 x 17 Format

Figure A1-1	Project Site Map
Figure A1-2	Plan and Profile of Existing Beach Valve Pit and Underpass Structures
Figure A1-3	Beach Valve Pit Decommissioning Schematic
Figure A1-4	Underpass Conduit Cement Slurry Installation Schematic
Figure A1-5	Underpass End Structure Decommissioning Schematic
Table A1-1	Preliminary Decommissioning Schedule
Table A1-2	Material Import/Export and Associated Truck Trips

A2 – 8 ½ x 11 Format

Figure A2-1	Pipeline Termination Anchors
Figure A2-2	Typical Mooring Leg
Figure A2-3	Underpass Pipe Removal
Figure A2-4	Fill Line Slurry Installation
Figure A2-5	Beach Valve Pit Demolition
Figure A2-6	Installing Cement Slurry Plug in Underpass
Figure A2-7	End Structure Excavation Schematic
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Figure A2-9	Artist Conception of Beach at End Structure after Restoration
Figure A2-10	Rock Groin Removal
Figure A2-11	Beach Pipeline Removal Operations
Figure A2-12	Surf Zone Removal by Dynamic Pipe Ramming
Figure A2-13	Reverse Pipe Lay Method
Figure A2-14	Seafloor Based Method
Figure A2-15	Typical Anchor Chain Recovery Operation
Figure A2-16	Recovering Buried Anchor
Figure A2-17	Onshore Work Areas
Table A2-1	Manpower and Equipment Estimates by Activity



PROJECT SITE MAP

ENCINA POWER STATION
MARINE OIL TERMINAL
DECOMMISSIONING PROJECT

NOTES

1. AERIAL PHOTOGRAPH GOOGLE EARTH IMAGERY DATED 11/2/12
2. BATHYMETRY FUGRO PELAGOS SURVEY DATED APRIL 2013
3. TANKER BERTH MOORING BUOY LOCATIONS SHOWN PER AERIAL PHOTOGRAPH OF OCTOBER 1, 2004 (MOORING BUOYS WERE REMOVED IN 2010)
4. TANKER BERTH MOORING ANCHOR LOCATIONS ARE APPROXIMATE LOCATIONS AND WILL BE LOCATED DURING DECOMMISSIONING ANCHOR RECOVERY OPERATIONS.
5. SUBMARINE PIPELINE TERMINATION MARKER BUOY IS DISPLAYED TO SHOW APPROXIMATE POSITION OF MARKER BUOY SYSTEM. THE MARKER BUOY NO LONGER EXISTS AND ONLY THE MARKER BUOY ANCHOR LEG AND CLUMP REMAIN ON THE SEAFLOOR.
6. THE KELP BED LOCATIONS ARE TAKEN FROM THE FUGRO PELAGOS APRIL 2013 SURVEY. HOWEVER, A REVIEW OF HISTORICAL AERIAL PHOTOGRAPHS OF THE OFFSHORE SITE INDICATE THAT THE LOCATION OF THE KELP BEDS AND THEIR DIMENSIONS AND DENSITY CHANGE FROM YEAR TO YEAR. CABRILLO PROPOSES TO RE-ASSESS THE BOUNDARIES OF THE KELP BEDS DURING THE DECOMMISSIONING PROJECT'S PRE-DECOMMISSIONING SEAFLOOR DEBRIS SURVEY PRIOR TO THE ARRIVAL OF MARINE EQUIPMENT AT THE OFFSHORE SITE. THE ANCHORAGES OF MARINE EQUIPMENT WILL BE ADJUSTED TO ELIMINATE CONTACT WITH KELP BEDS AS THEY EXIST AT THE TIME OF THE DECOMMISSIONING WORK. FINAL ANCHORAGE LOCATIONS WILL BE PROVIDED IN THE CONTRACTOR WORK PLAN PRIOR TO THE ARRIVAL OF MARINE EQUIPMENT AT THE OFFSHORE SITE.

LEGEND

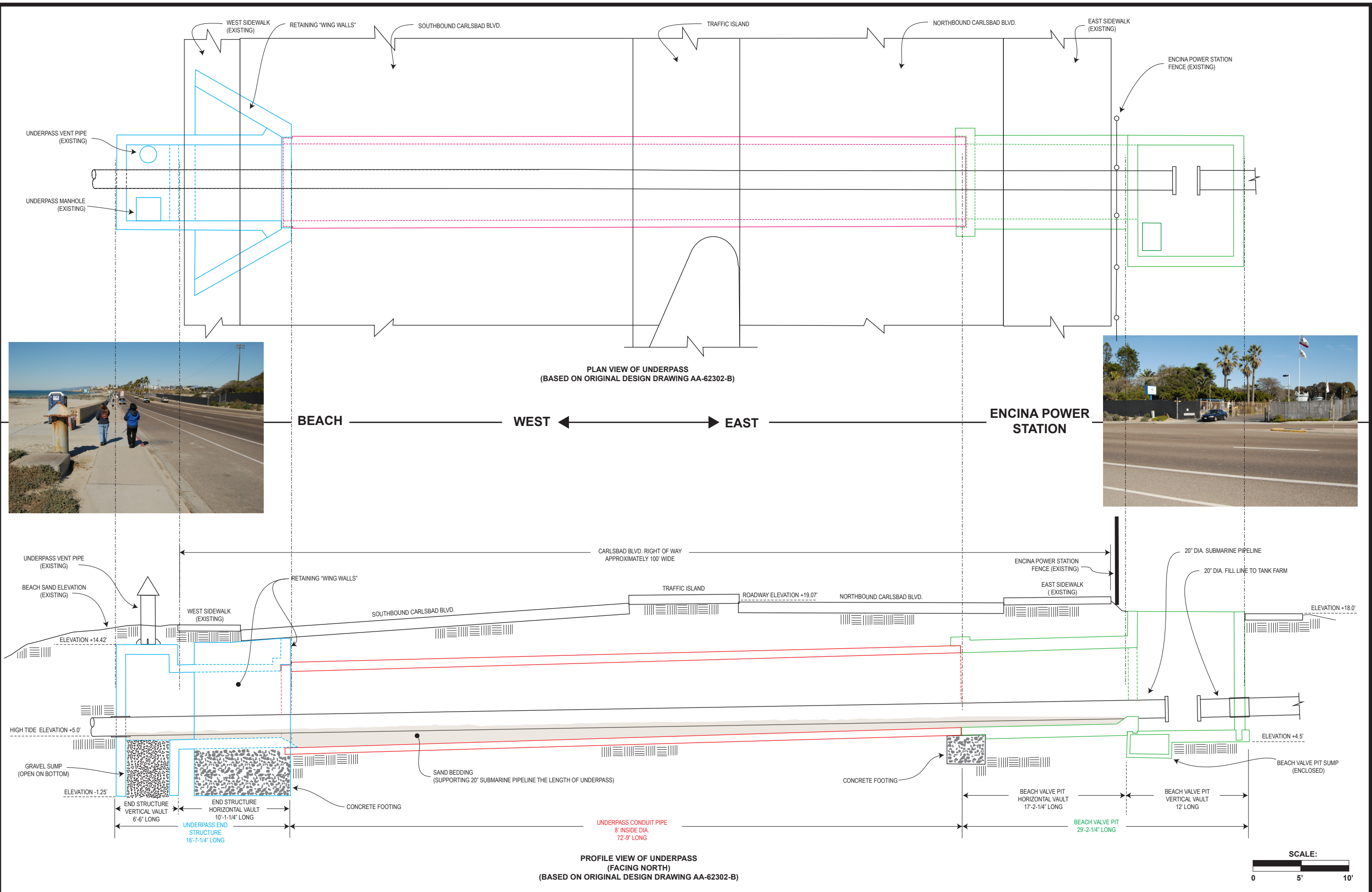
- TANKER BERTH MOORING BUOY, ANCHOR AND CHAIN
- OFFSHORE SUBMARINE PIPELINE
- SURF ZONE SUBMARINE PIPELINE
- BEACH SUBMARINE PIPELINE SEGMENT
- ONSHORE SUBMARINE PIPELINE SEGMENT
- FILL LINE (BEACH VALVE PIT TO TANK FARM)
- KELP BEDS - PER FUGRO PELAGOS APRIL 2013 SURVEY
- ROCK OUTCROPPINGS - PER FUGRO PELAGOS APRIL 2013 SURVEY
- OFFSHORE PROJECT SAFETY AND SURVEY BOUNDARIES

SCALE: 1" = 200'



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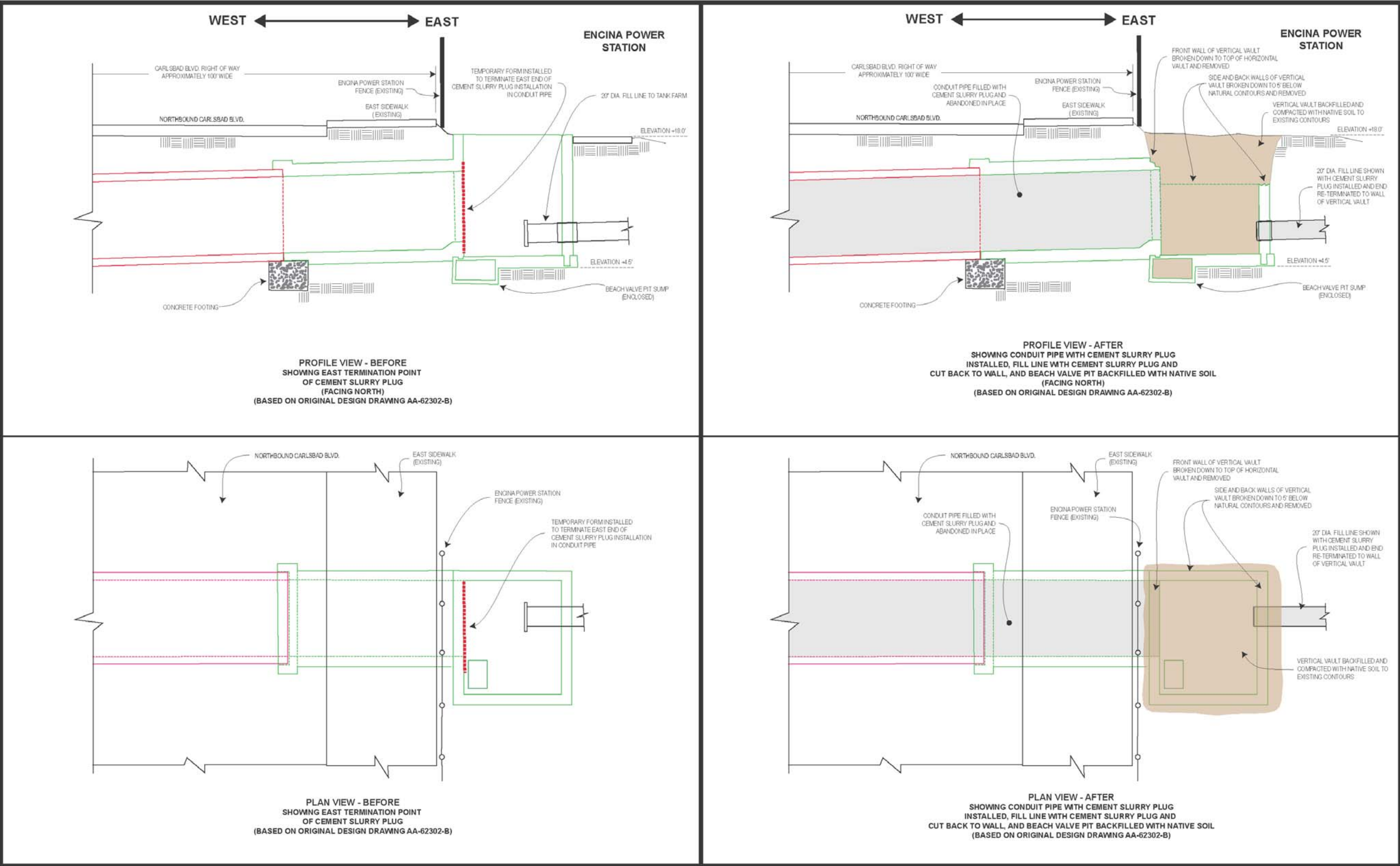
FIGURE A1-1
PROJECT SITE MAP



ENCINA MARINE OIL TERMINAL DECOMMISSIONING PROJECT



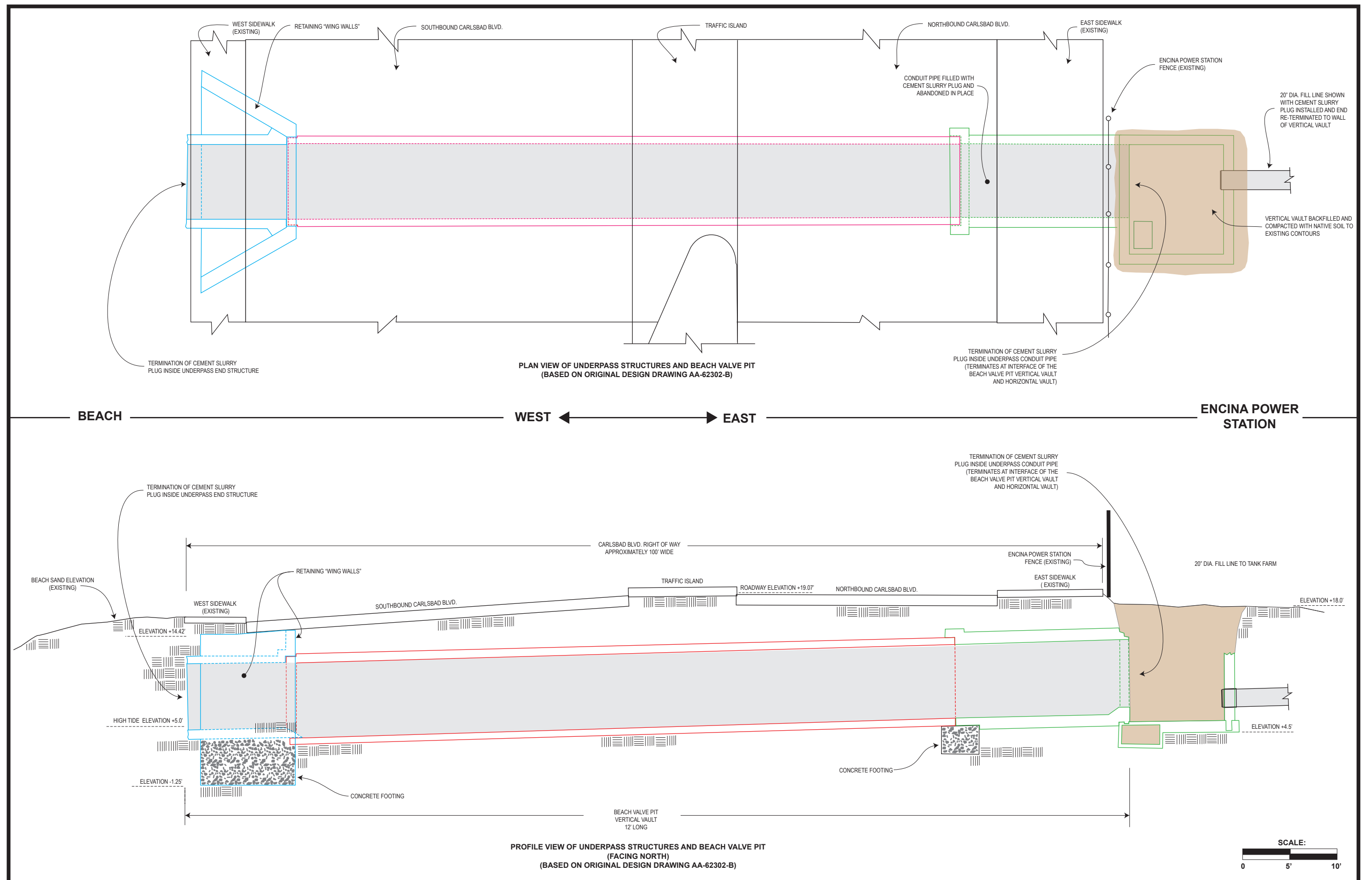
FIGURE A1-2
PLAN AND PROFILE OF BEACH VALVE PIT AND UNDERPASS STRUCTURES



ENCINA MARINE OIL TERMINAL DECOMMISSIONING PROJECT



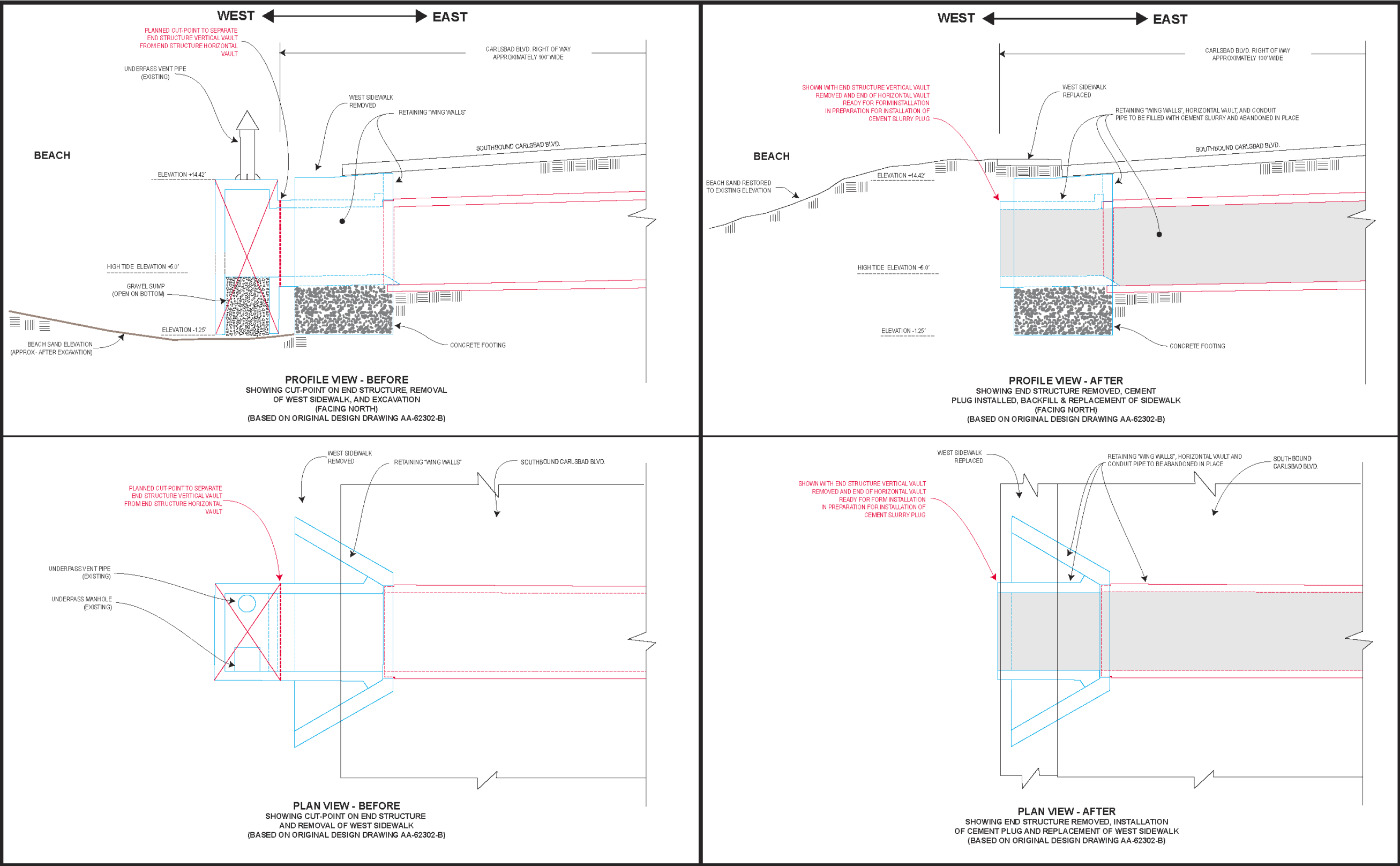
FIGURE A1-3
BEACH VALVE PIT DECOMMISSIONING SCHEMATIC



ENCINA MARINE OIL TERMINAL DECOMMISSIONING PROJECT



FIGURE A1-4
UNDERPASS CONDUIT CEMENT SLURRY INSTALLATION SCHEMATIC



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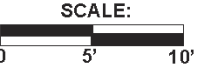
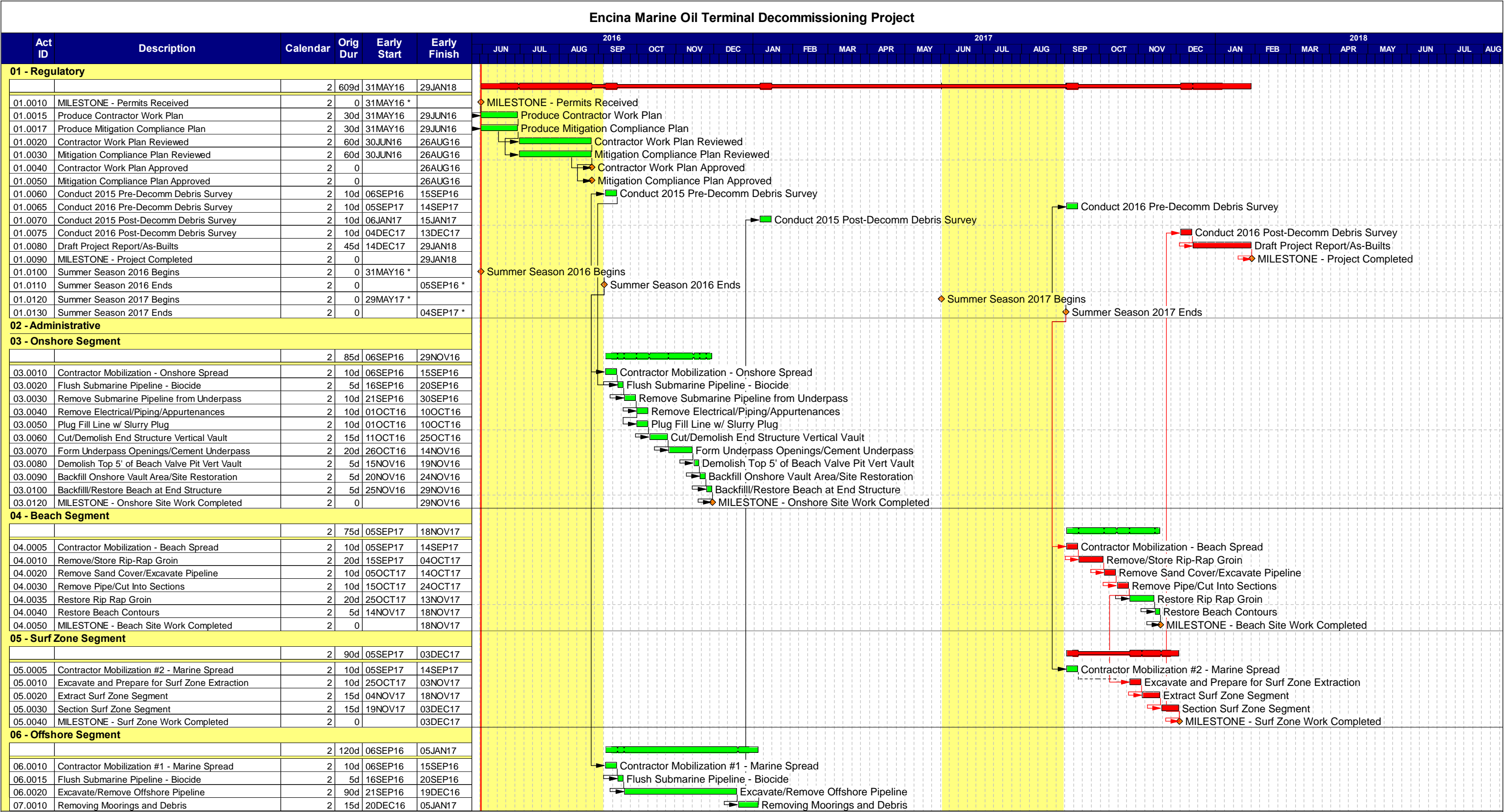


FIGURE A1-5
UNDERPASS END STRUCTURE DECOMMISSIONING SCHEMATIC



Start date	31MAY16
Finish date	29JAN18
Data date	31MAY16
Run date	30JUN15
Page number	1A
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Preliminary Decommissioning Schedule
TABLE A1-1

- Early bar

Progress bar

Critical bar

Summary bar

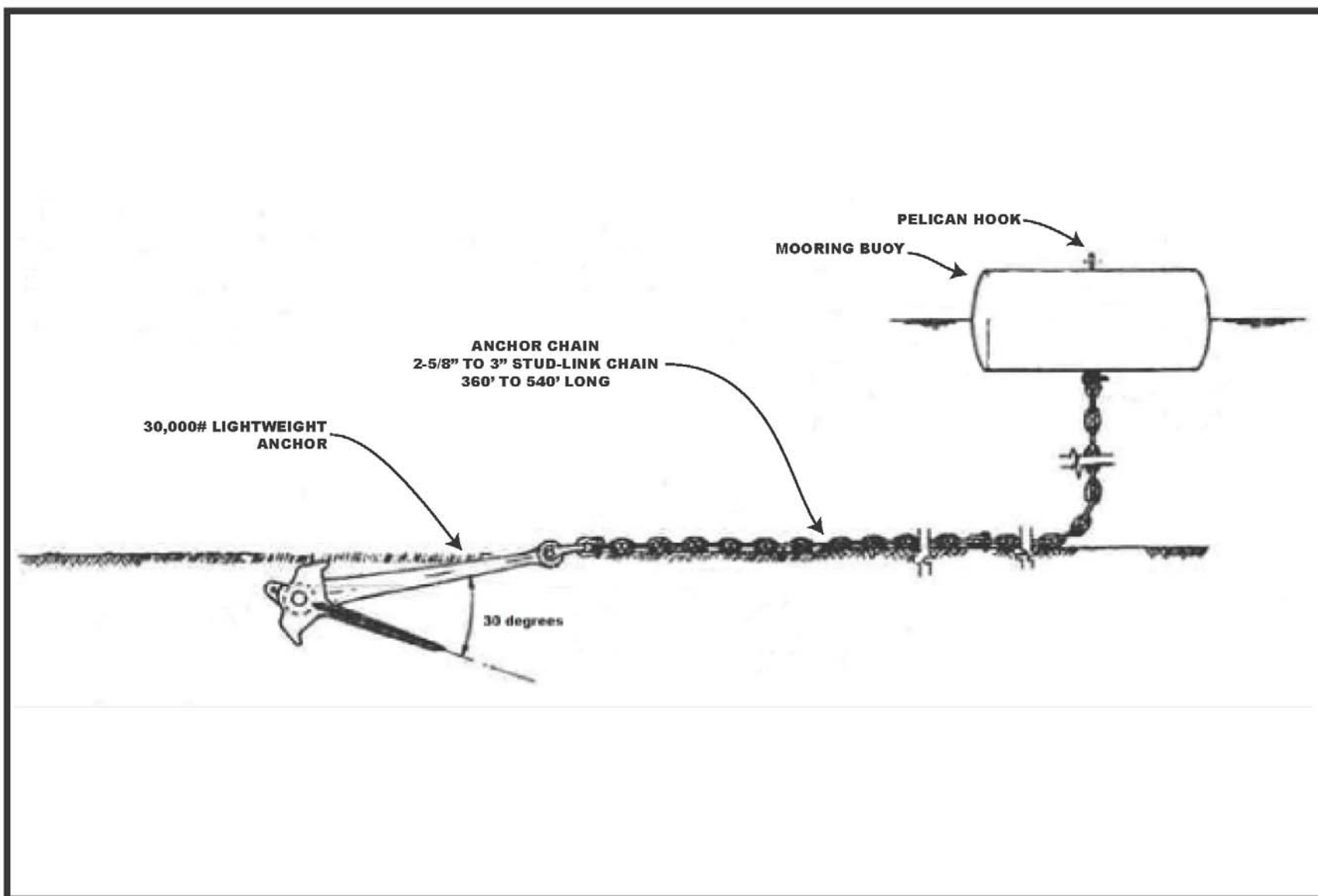
Start milestone point

Finish milestone point

TABLE A1-2 - MATERIAL IMPORT/EXPORT AND ASSOCIATED TRUCK TRIPS

		Breakdown				Totals				Truck Trips		
		Qty.	Units	Each	Units	Total 1	Units 1	Total 2	Units 2	Transportation/Disposal Method	Resource	Qty.
1	Flushwater - Remove preservative and biocide											
1.1	Submarine Pipeline - Beach Valve to Offshore Termination	3,855.0	ft	15.90	gals/ft	61,283.7	gals			Truck to sanitation facility for treatment and discharge.	110 bbl Vac Truck	13.3
2	Onshore											
2.1	Submarine Pipeline - Steel and Coating	110.0	ft	243.05	lbs/ft	26,735.5	lbs	13.4	tons	Truck to offsite recycler.	20 ton Flatbed Truck	0.7
2.2	Sand Bedding - 522 sq in x 12"/1728=plf/27/261£	110.0	ft	3.65	cu ft	14.9	cu yds	20.1	tons	If contaminated ship offsite for disposal	20 ton Transfer Dump	1.0
2.3	Fill Line - Slurry Plug	380.0	ft	14.90	gals/ft	28.0	cu yds	34.0	tons	Cement trucks to site.	9 yd Cement Truck	3.1
2.4	End Structure Vertical Vault Demolition											
a	Concrete and Rebar Demolition	15.4	cu yds	1.00	each	15.4	cu yds	34.0	tons	Truck to offsite recycler.	20 ton Flatbed Truck	0.8
b	Beach Sand Excavation to Expose End Structure	452.0	cu yds	1.00	each	452.0	cu yds	610.2	tons	None. Stockpile on beach.		
c	Gravel Bed Excavation	7.1	cu yds	1.00	each	7.1	cu yds	11.4	tons	Truck to offsite recycler.	20 ton Flatbed Truck	1.0
d	Rip-Rap Excavation	33.5	cu yds	1.00	each	33.5	cu yds	45.2	tons	Truck to offsite recycler.	20 ton Transfer Dump	2.3
e	Additional Sand Backfill	127.2	cu yds	1.00	each	127.2	cu yds	171.7	tons	Trucked in from offsite source.	20 ton Transfer Dump	8.6
2.5	Electrical, Piping and Appurtenance Demolition	1.0	tons	1.00	each	1.0	tons	1.0	tons	Trucked to offsite recycler	20 ton Transfer Dump	1.0
2.6	Underpass Conduit Slurry Plug	198.0	cu yds	1.00	each	198.0	cu yds	240.6	tons	Cement trucks to site.	9 yd Cement Truck	22.0
2.7	Beach Valve Pit											
a	Concrete and Rebar Demolition	8.7	cu yds	1.00	each	8.7	cu yds	17.6	tons	Trucks to offsite recycler	20 ton Transfer Dump	0.9
b	Native Soil Backfill	87.1	cu yds	1.00	each	87.1	cu yds	117.6	tons	Trucked in from offsite source.	20 ton Transfer Dump	5.9
3	Beach											
3.1	Submarine Pipeline - Steel and Coating	220.0	ft	243.05	lbs/ft	53,471.0	lbs	26.7	tons	Truck to offsite recycler.	20 ton Flatbed Truck	1.3
3.2	Beach Sand Excavation - based on 18'Hx36'Wx220'L/2/27	2,640.0	cu yds	1.00	each	2,640.0	cu yds	356.4	tons	None. Excavate and stockpile on beach, may be incremental		
3.3	Potential Rip-Rap Removal Under Beach 52'Wx8'x100'L	1,066.0	cu yds	1.00	each	1,066.0	cu yds	1,385.8	tons	none - to be stored onsite		
3.5	Rock Groin Removal - Rip-Rap Excavation - 55'Wx8'Hx160'L	1,848.0	cu yds	1.00	each	1,848.0	cu yds	2,402.4	tons	none - to be stored onsite		
3.6	Beach Disturbed Area - Excavation & Stockpile - 158' x 100'	15,800.0	sq ft	1.00	each							
4	Surf Zone											
4.1	Submarine Pipeline - Steel and Coating	750.0	ft	243.05	lbs/ft	182,287.5	lbs	91.1	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	4.6
5	Offshore											
5.1	Submarine Pipeline - Steel and Coating	2,775.0	ft	243.05	lbs/ft	674,463.8	lbs	337.2	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	16.9
5.2	Seafloor Excavation to Expose Pipeline	2,775.0	ft	0.15	cu yds/ft	401.7	cu yds					
5.3	Seafloor Excavation Disturbed Area	2,775.0	ft	2.00	ft	5,550.0	sq ft.					
5.4	Derrick Barge Anchor Disturbed Area	50.0	each	7,854.00	sq ft/ea	392,700.0	sq ft.					
5.5	Tanker Berth Anchor Recovery Excavation Area	7.0	each	314.00	sq ft/ea	2,198.0	sq ft.					
5.6	Tanker Berth Anchor Recovery Excavation Volume	7.0	each	2,512.00	cu ft/ea	17,584.0	cu ft	651.3	cu yds			
5.7	7-Point Mooring System											
a	Baldt Light Weight Anchors	7.0		30,000.00	lbs	210,000.0	lbs	105.0	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	5.3
b	Mooring Leg #1											
b1	2-3/4" Chain	1.0	shots	6,410.00	lbs	6,410.0	lbs	3.2	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.2
b2	3" Chain	5.0	shots	7,650.00	lbs	38,250.0	lbs	19.1	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	1.0
c	Mooring Leg #2											
c1	2-3/4" Chain	4.5	shots	6,410.00	lbs	28,845.0	lbs	14.4	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.7
c2	3" Chain	1.0	shots	7,650.00	lbs	7,650.0	lbs	3.8	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.2
d	Mooring Leg #3											
d1	2-5/8" Chain	2.0	shots	5,820.00	lbs	11,640.0	lbs	5.8	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.3
d2	2-3/4" Chain	1.5	shots	6,410.00	lbs	9,615.0	lbs	4.8	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.2
d3	3" Chain	1.5	shots	7,650.00	lbs	11,475.0	lbs	5.7	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.3
e	Mooring Leg #4											
e1	2-3/4" Chain	2.0	shots	6,410.00	lbs	12,820.0	lbs	6.4	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.3
e2	3" Chain	2.0	shots	7,650.00	lbs	15,300.0	lbs	7.7	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.4
f	Mooring Leg #5											
f1	2-5/8" Chain	2.0	shots	5,820.00	lbs	11,640.0	lbs	5.8	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.3
f2	2-3/4" Chain	0.5	shots	6,410.00	lbs	3,205.0	lbs	1.6	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.1
f3	3" Chain	1.5	shots	7,650.00	lbs	11,475.0	lbs	5.7	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.3
g	Mooring Leg #6											
g1	2-5/8" Chain	2.5	shots	5,820.00	lbs	14,550.0	lbs	7.3	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.4
g2	2-3/4" Chain	1.0	shots	6,410.00	lbs	6,410.0	lbs	3.2	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.2
g3	3" Chain	1.5	shots	7,650.00	lbs	11,475.0	lbs	5.7	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.3
h	Mooring Leg #7											
h1	3" Chain	5.0	shots	7,650.00	lbs	38,250.0	lbs	19.1	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	1.0
5.8	Single Point Mooring											
a	Navy Stockless Anchor	1.0	each	14,000.00	lbs	14,000.0	lbs	7.0	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.4
b	2-3/4" Chain	4.0	shots	6,410.00	lbs	25,640.0	lbs	12.8	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.6
c	3" Chain	2.0	shots	7,650.00	lbs	15,300.0	lbs	7.7	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.4
5.9	Fuel Oil Pipeline Termination Anchor											
a	Danforth Anchors	2.0	each	14,000.00	lbs	28,000.0	lbs	14.0	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.7
b	2" Stud Link Anchor Chain	2.0	shots	3,360.00	lbs	6,720.0	lbs	3.4	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.2
5.10	Navigation Buoy											
a	Concrete Clump - 4'x4'x4'	10,240.0	lbs.	1.00	each	10,240.0	lbs	5.1	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.3
b	1-1/2" Anchor Chain	390.0	links	1,940.00	lbs/shot	4,226.8	lbs	2.1	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.1
c	2" Anchor Chain	42.0	links	3,360.00	lbs/shot	1,061.1	lbs	0.5	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.1
d	2-3/4" Anchor Chain	19.0	links	6,410.00	lbs/shot	1,255.6	lbs	0.6	tons	Barge to shorebase, truck to offsite recycler.	20 ton Flatbed Truck	0.1
												97.8

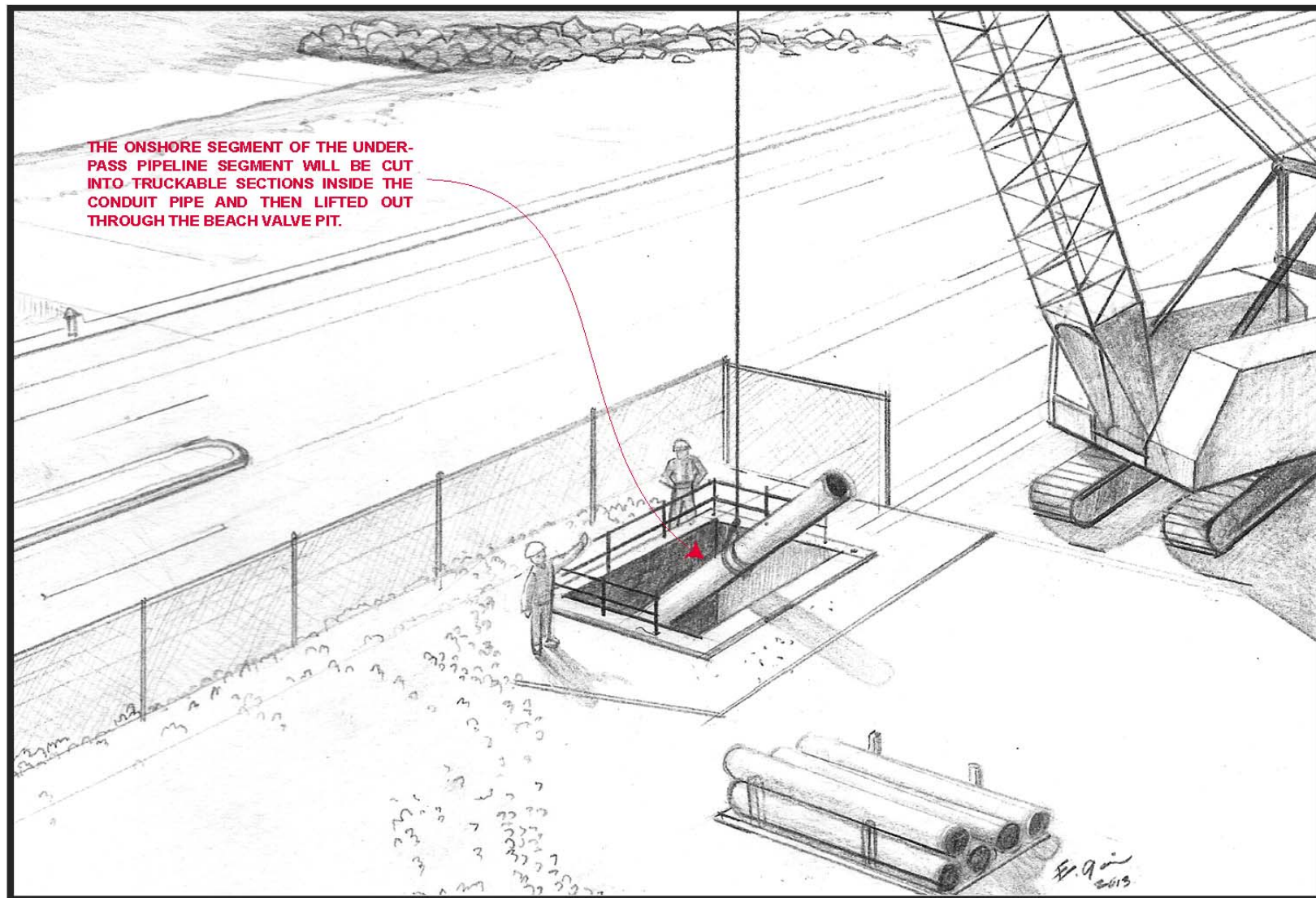




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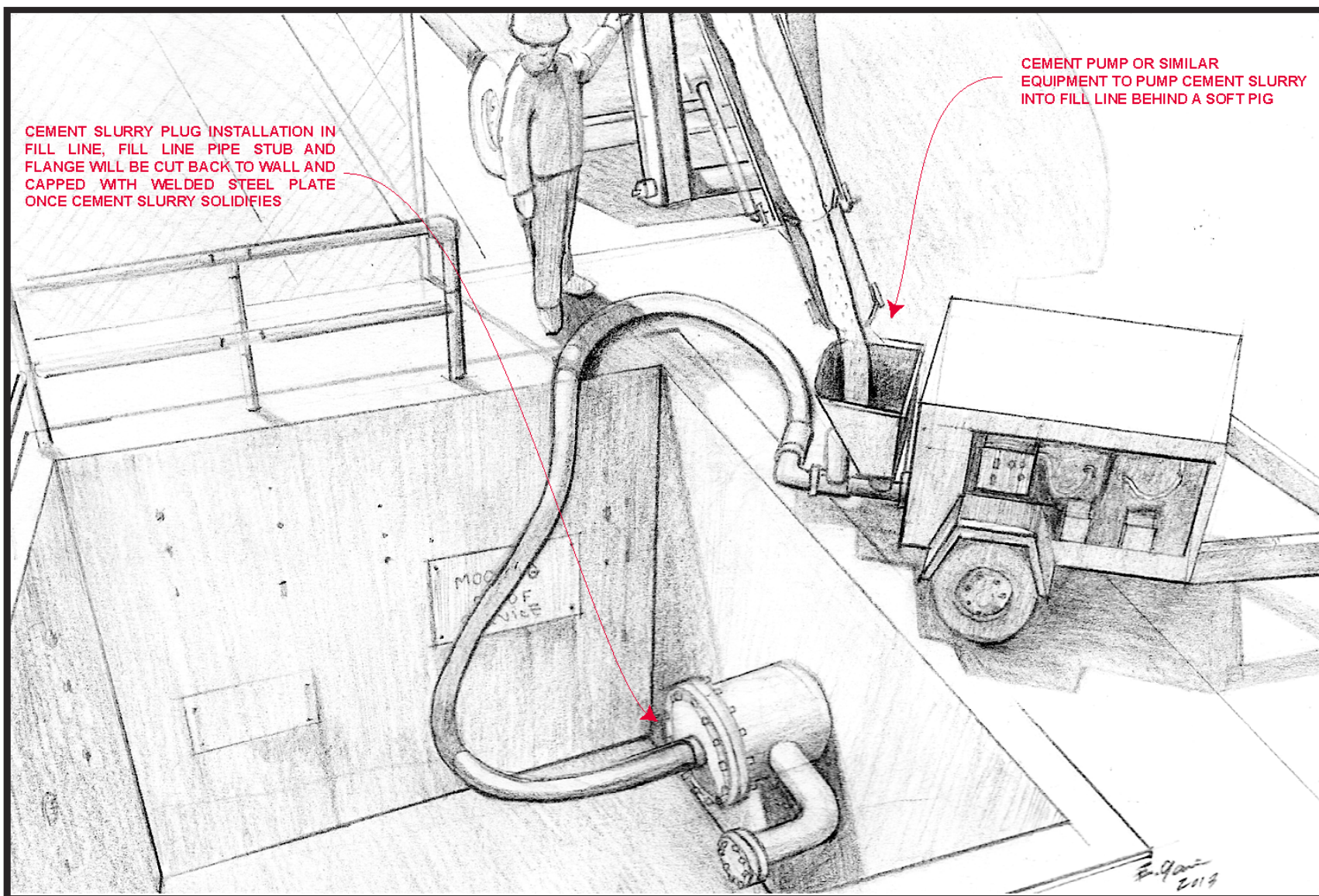
FIGURE A2-2
TYPICAL MOORING LEG



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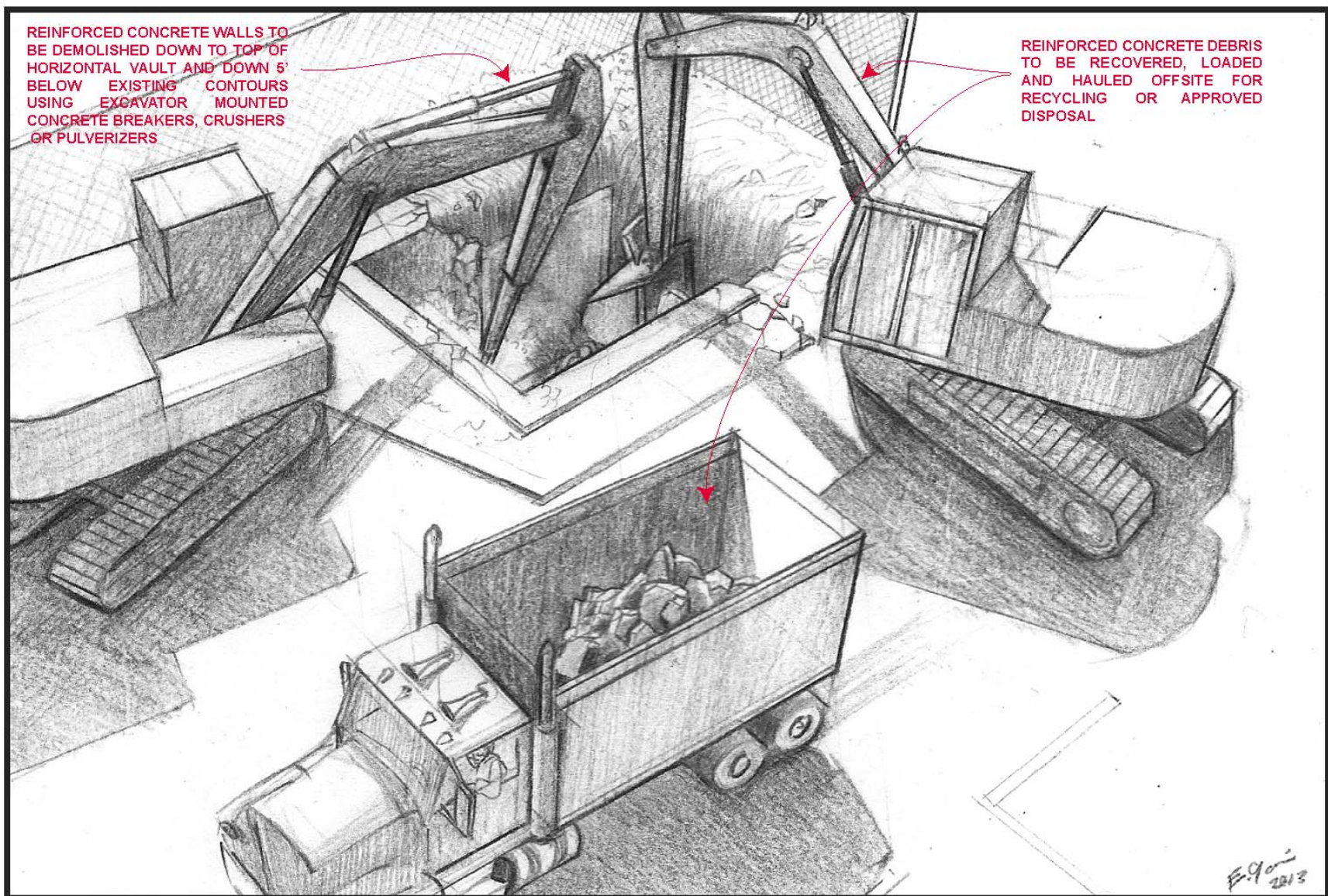
FIGURE A2-3
UNDERPASS PIPELINE REMOVAL



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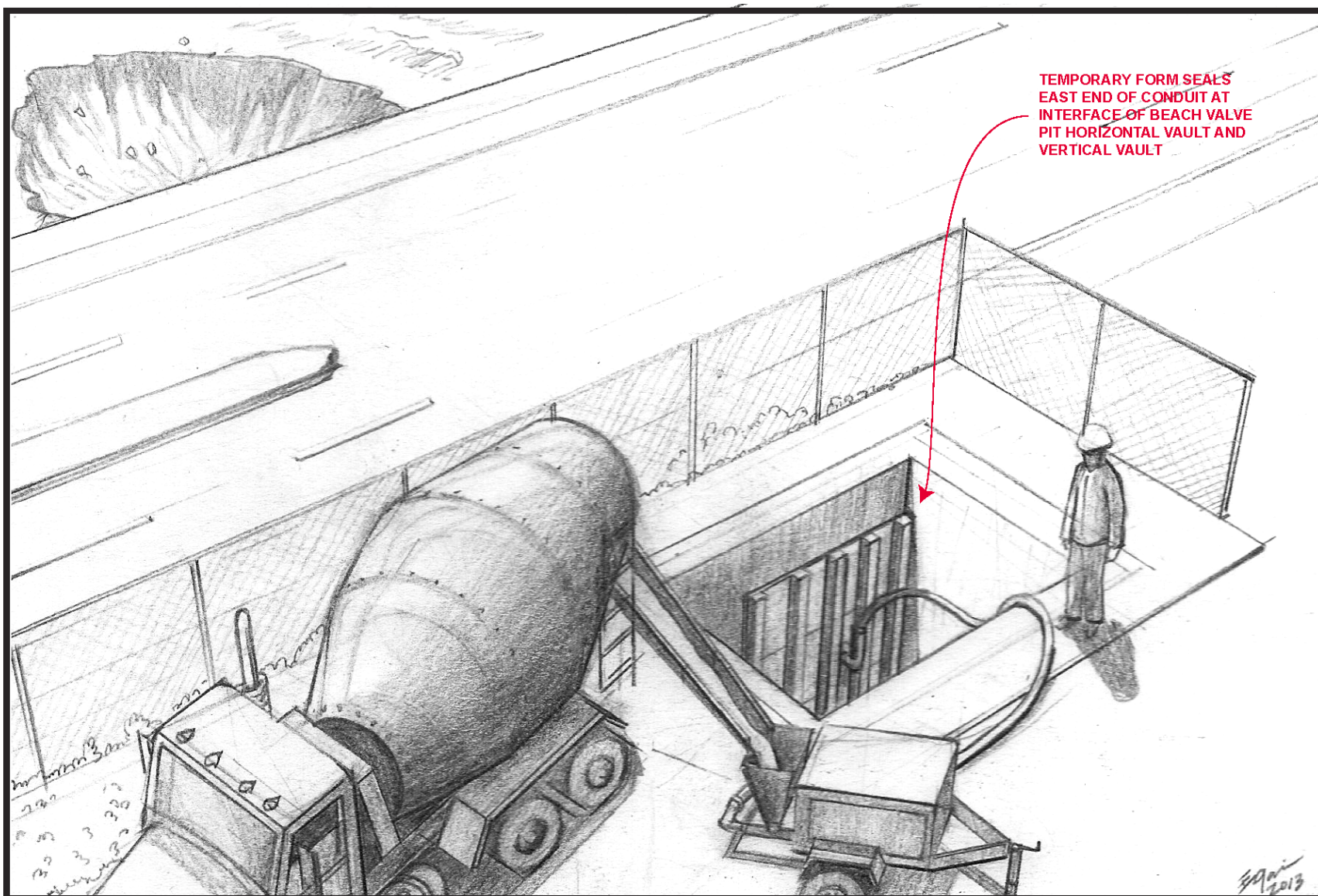
FIGURE A2-4
FILL LINE SLURRY PLUG INSTALLATION



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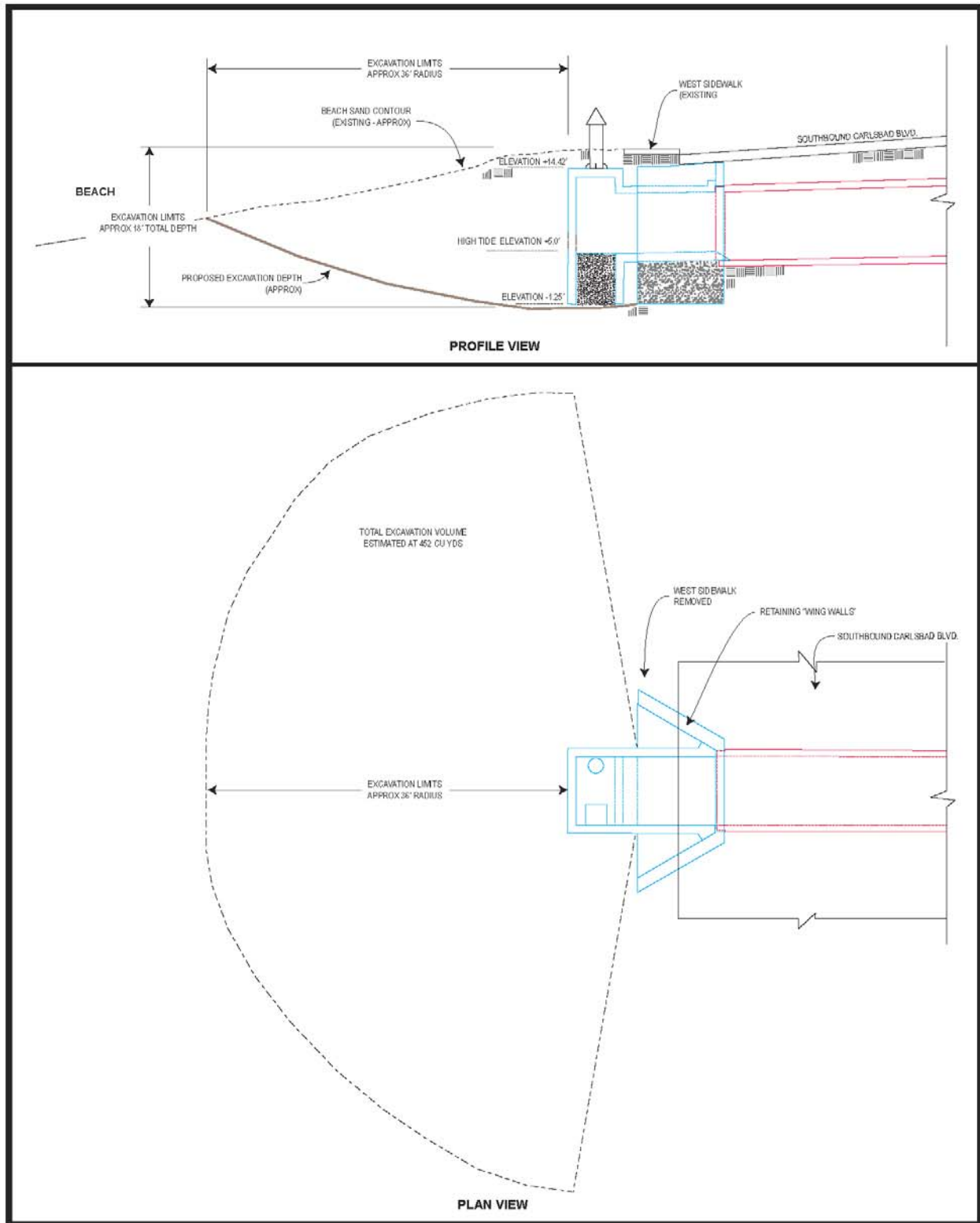
**FIGURE A2-5
BEACH VALVE PIT DEMOLITION**



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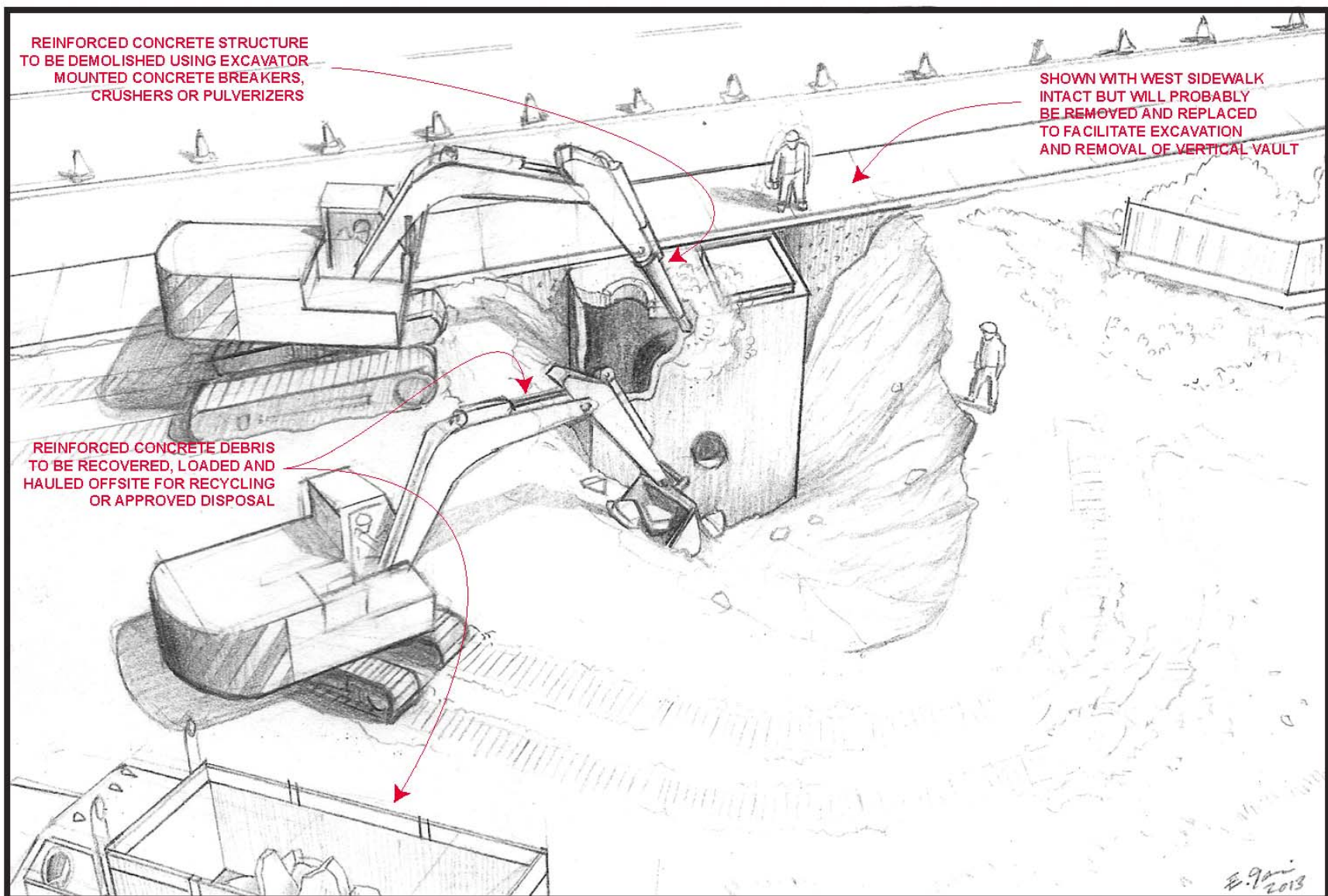
**FIGURE A2-6
INSTALLING CEMENT SLURRY PLUG IN UNDERPASS**



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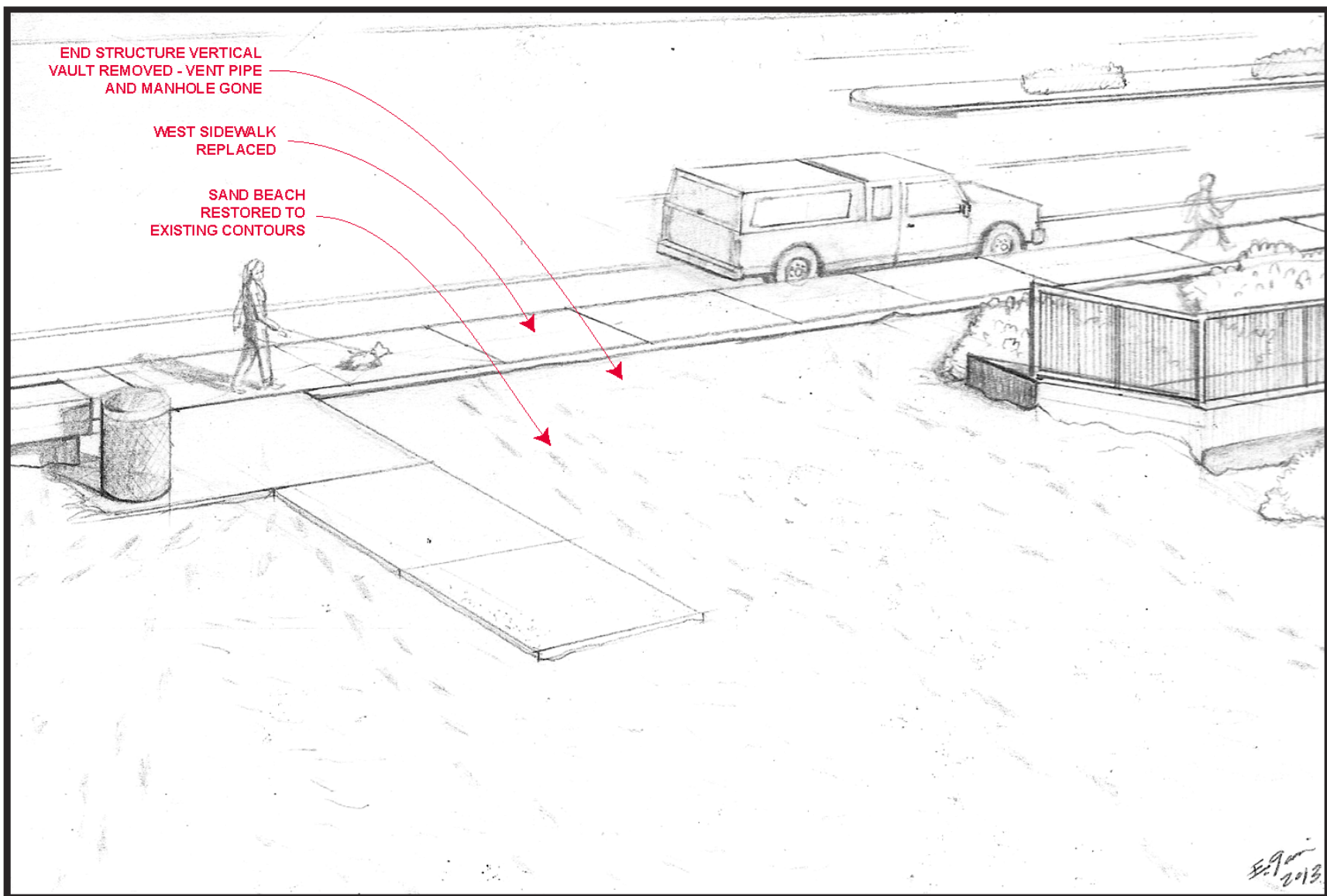
FIGURE A2-7
END STRUCTURE EXCAVATION SCHEMATIC



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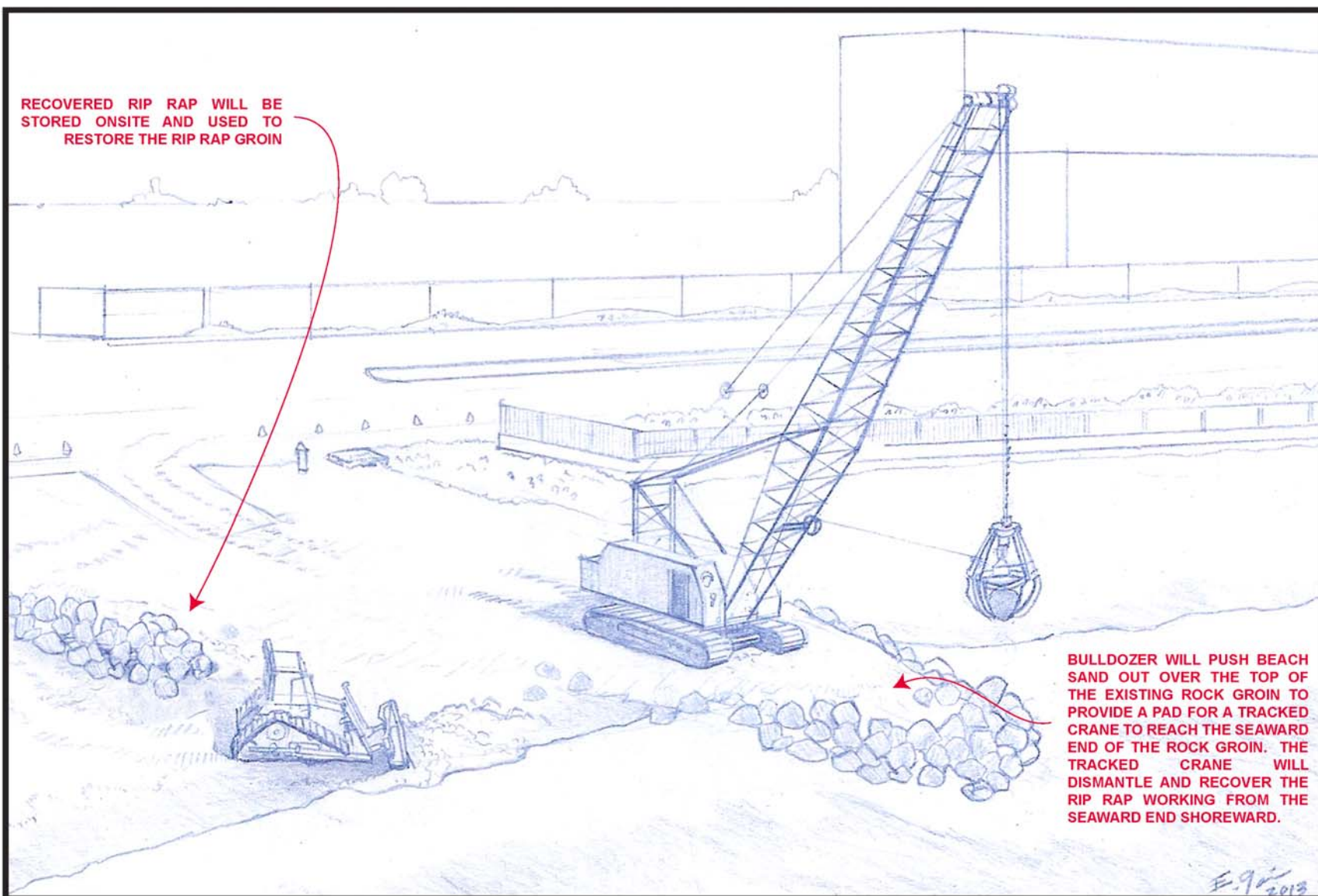
**FIGURE A2-8
END STRUCTURE VERTICAL VAULT DEMOLITION**



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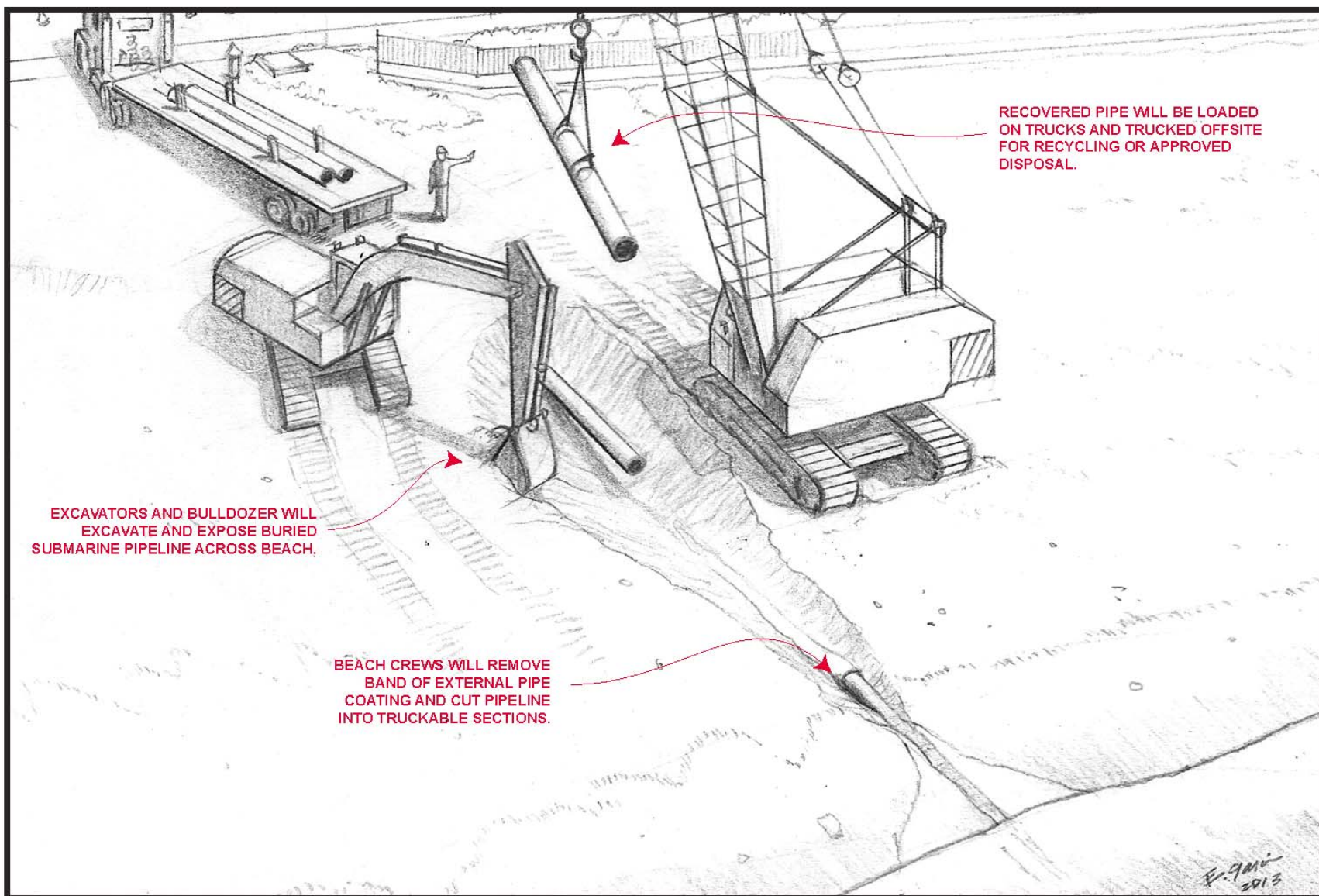
FIGURE A2-9
ARTIST CONCEPTION OF BEACH AT END STRUCTURE
AFTER RESTORATION



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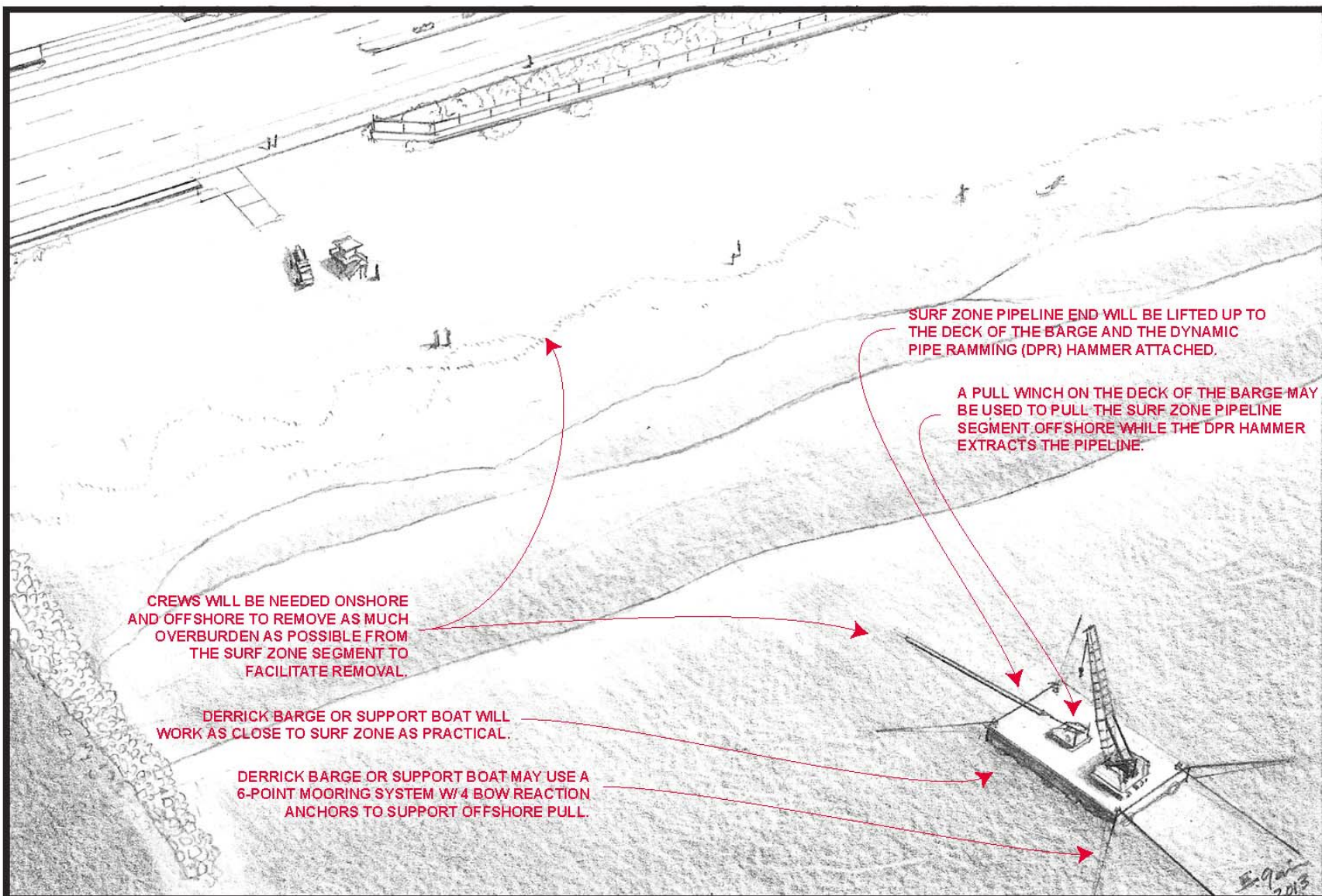
**FIGURE A2-10
ROCK GROIN REMOVAL**



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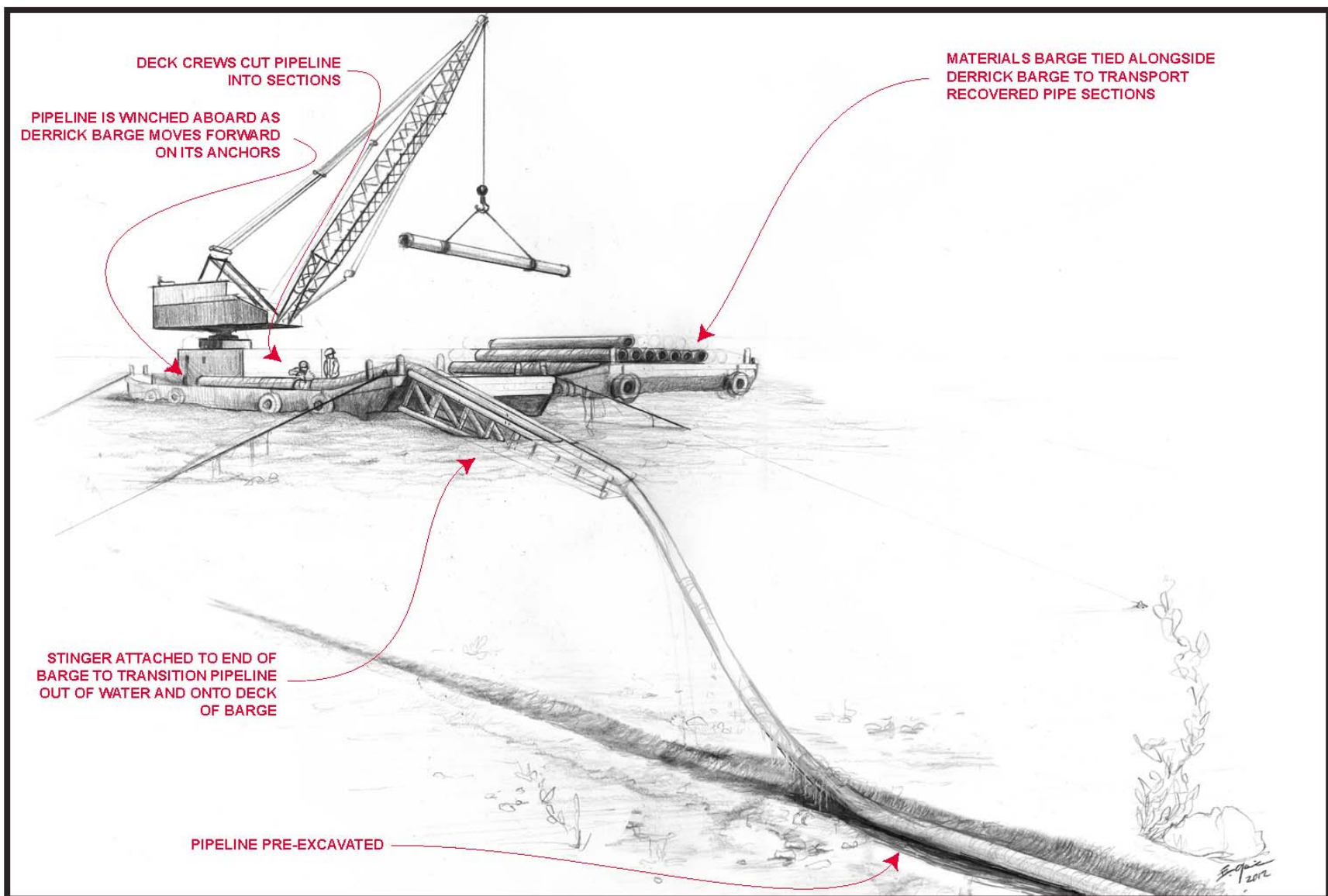
**FIGURE A2-11
BEACH PIPELINE REMOVAL OPERATIONS**



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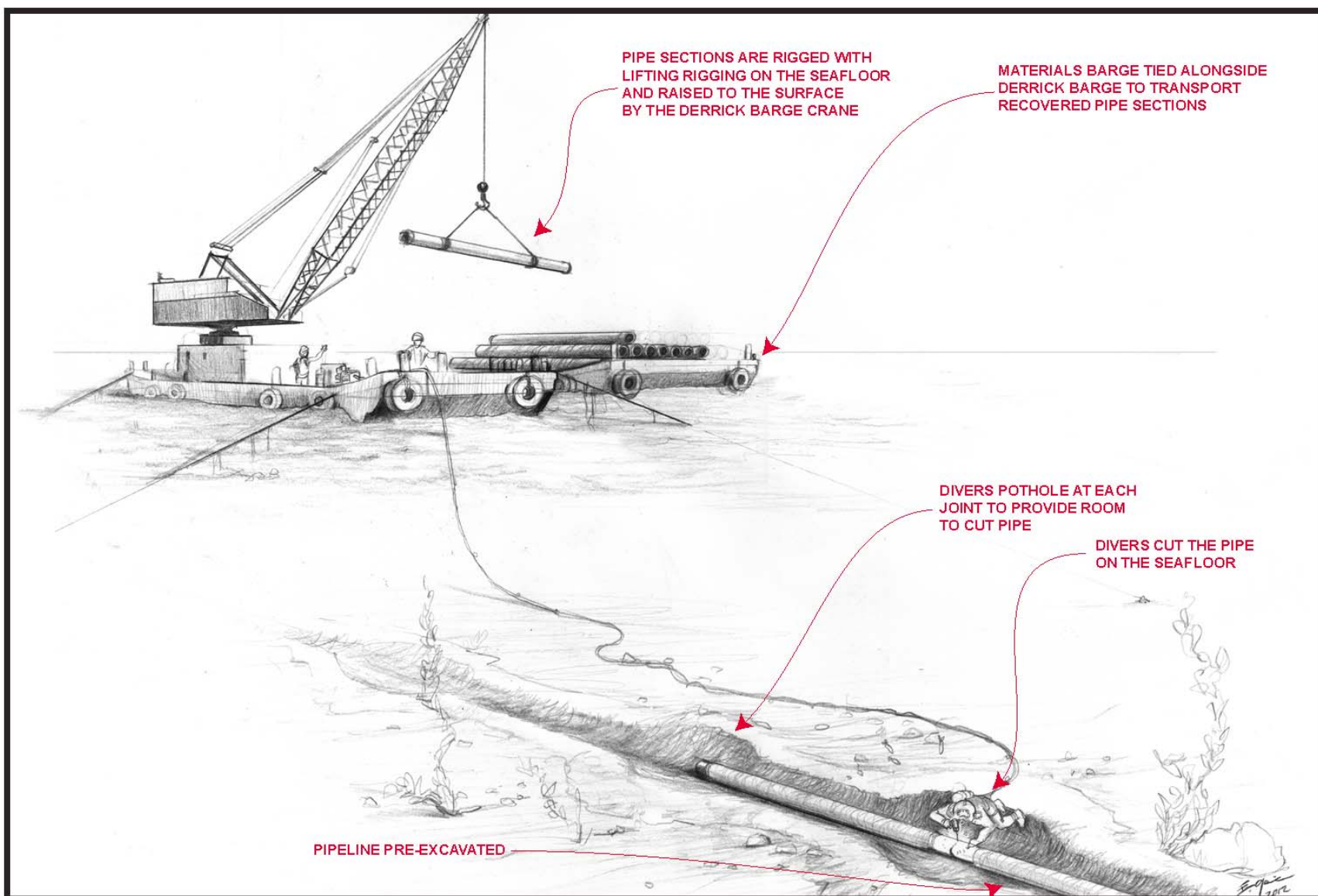
FIGURE A2-12
SURF ZONE REMOVAL BY DYNAMIC PIPE RAMMING



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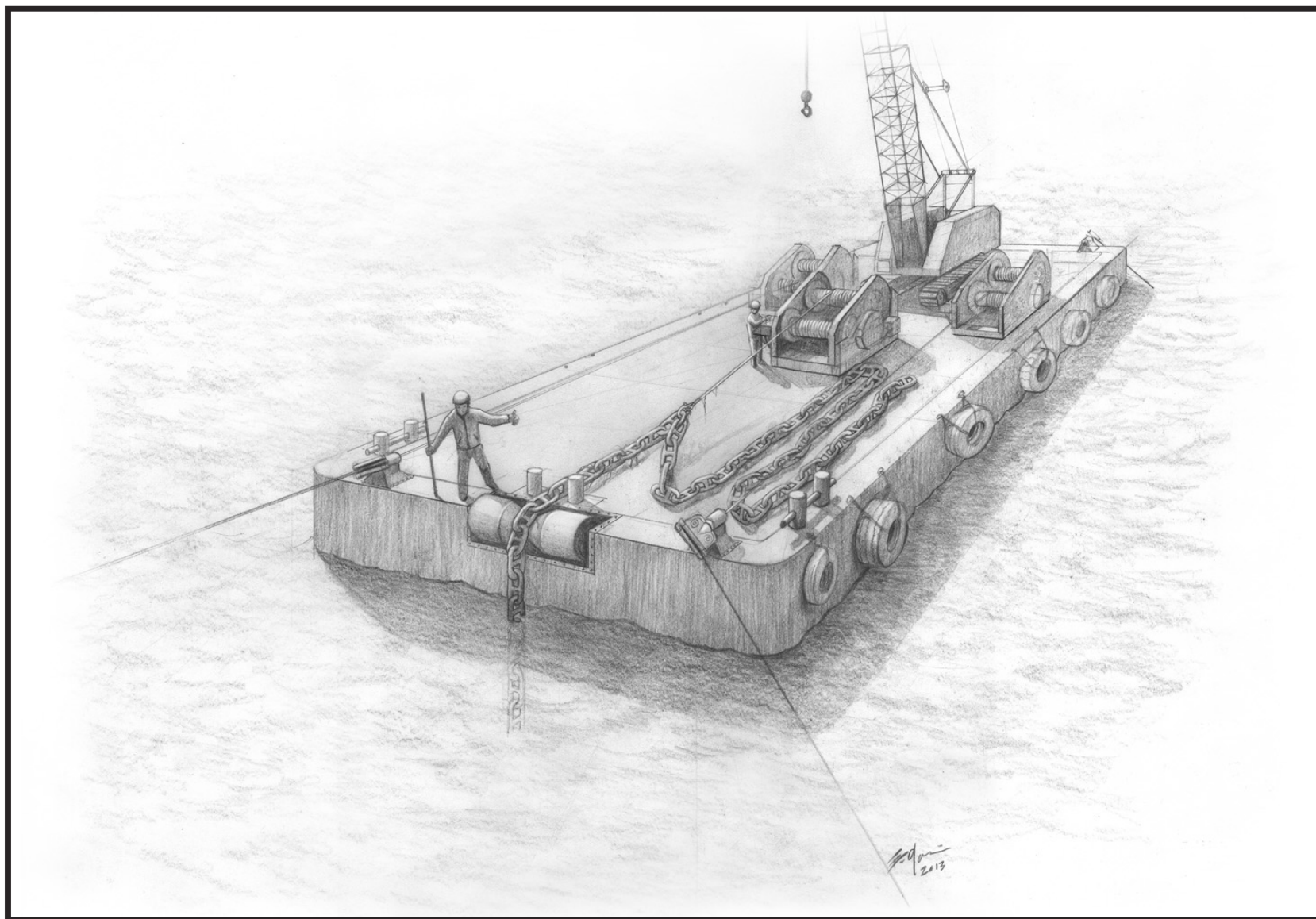
FIGURE A2-13
REVERSE PIPE LAY METHOD



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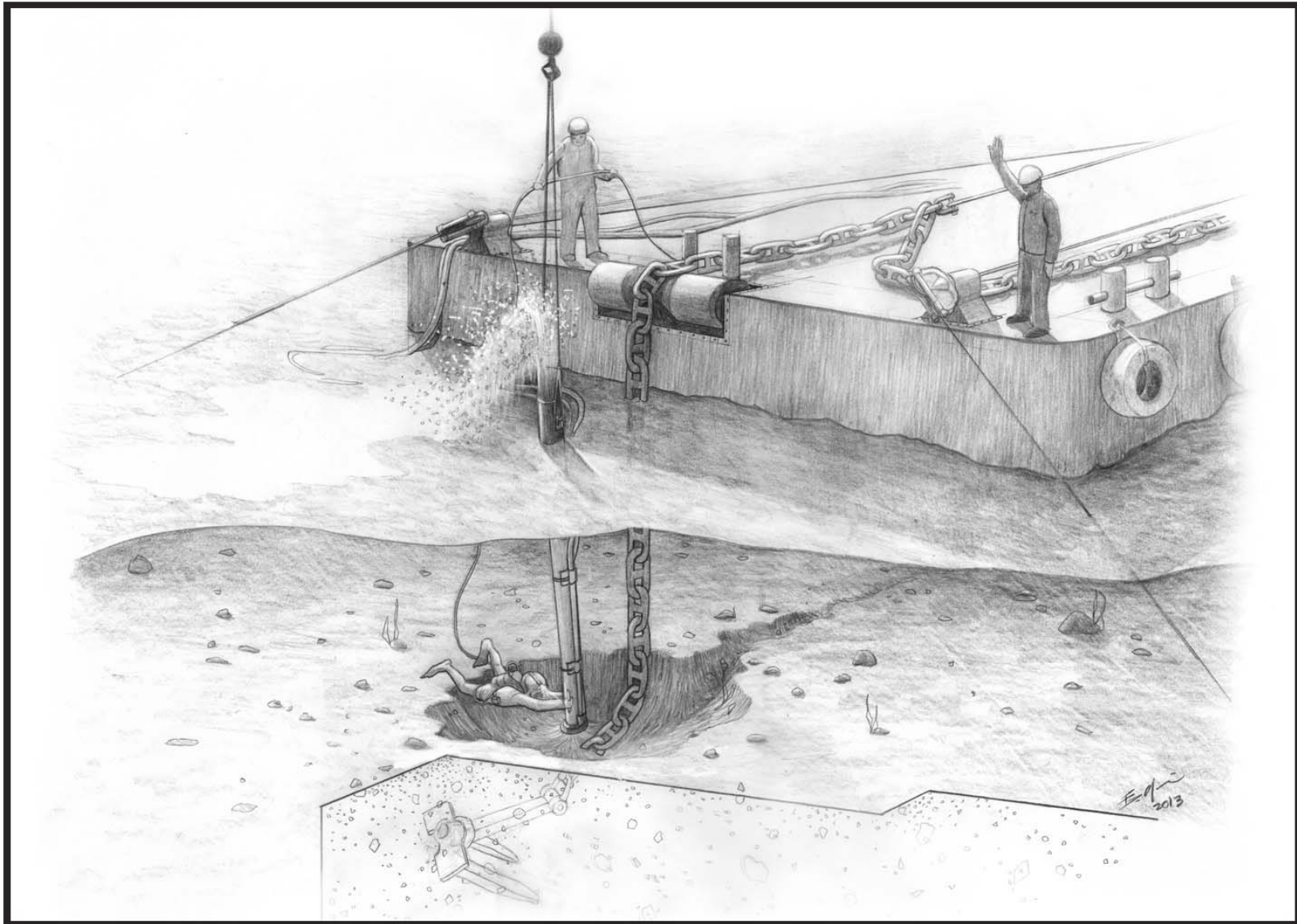
FIGURE A2-14
SEAFLOOR BASED METHOD



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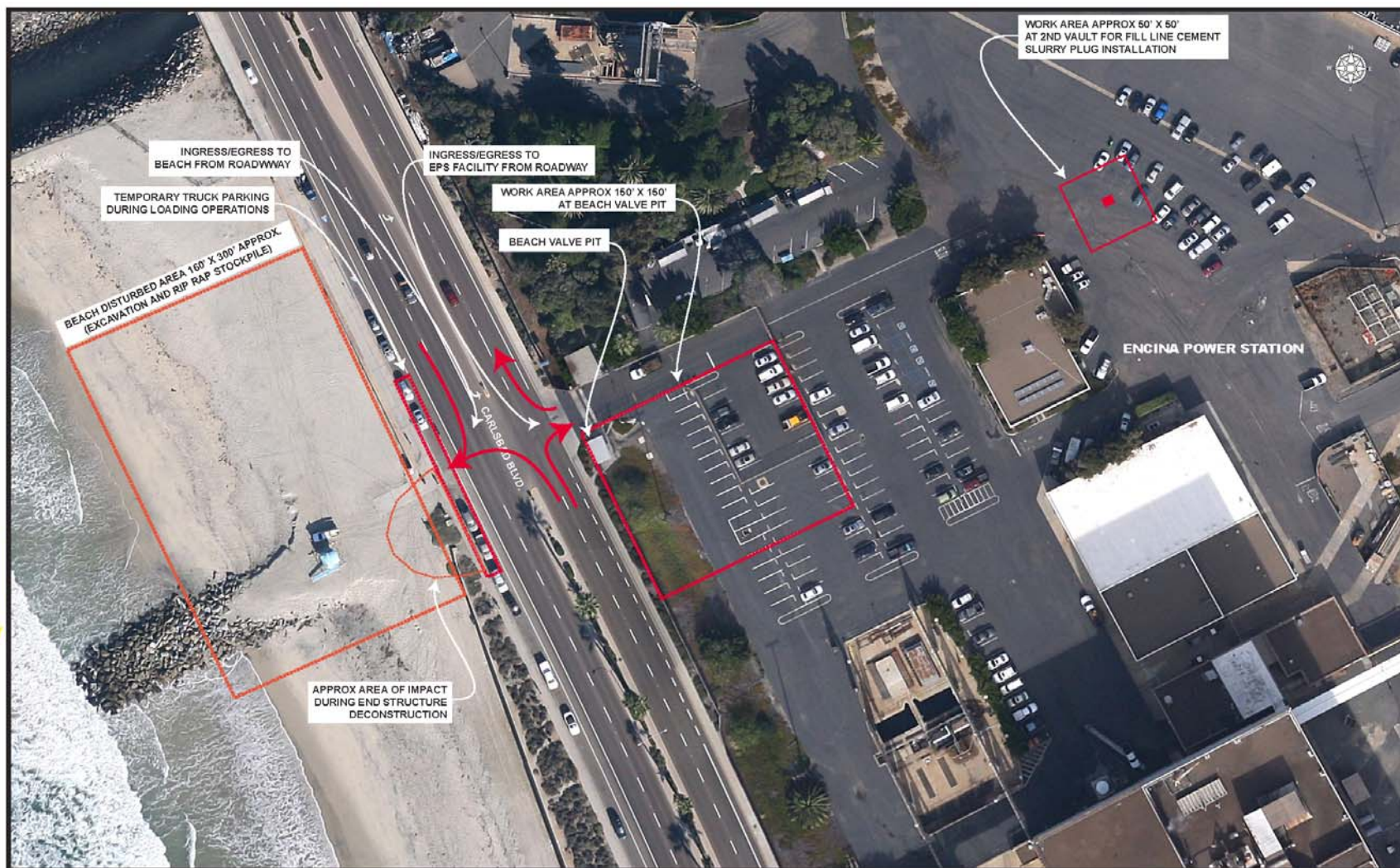
FIGURE A2-15
TYPICAL ANCHOR CHAIN RECOVERY OPERATION



ENCINA MARINE OIL TERMINAL DECOMMISSIONING PROJECT



FIGURE A2-16
RECOVERING BURIED ANCHOR



ENCINA MARINE OIL TERMINAL DECOMMISSIONING PROJECT



**FIGURE A2-17
ONSHORE WORK AREAS**

Table A2-1 Manpower and Equipment Estimates by Activity

Onshore Segment Decommissioning Activities				
Manpower:	Qty.	Hours:	Days:	Total Hours:
Project Manager	1	12	75	900
Environmental Monitor	1	12	75	900
Superintendent	1	12	75	900
Heavy Equipment Operators	3	12	75	2700
Welders	2	12	75	1800
Hazardous Materials Crew	4	12	75	3600
Riggers/Roustabouts	4	12	75	3600
Laborers	4	12	75	3600
Traffic/Beach Safety Monitors	2	12	75	1800
Equipment:	Total Estimated Equipment Hours:			
Excavators - CAT 329 - 228 HP			840	
Bulldozer - CAT D9 - 448 HP			320	
Front End Loader (Wheel Loader) CAT 992 - 907 HP			160	
Rough Terrain Crane - 160 HP			360	
Concrete Pump - Cummins 220 HP			40	
Generator - CAT XQ100 - 173 HP			700	
Welding Machine			50	
Industrial Air Compressor - 185 CFM - 48 HP			240	
Beach Segment Decommissioning Activities				
Manpower:	Qty.	Hours:	Days:	Total Hours:
Project Manager	1	12	65	780
Environmental Monitor	1	12	65	780
Superintendent	1	12	65	780
Heavy Equipment Operators	3	12	65	2340
Welders	2	12	65	1560
Hazardous Materials Crew	4	12	65	3120
Riggers/Roustabouts	2	12	65	1560
Laborers	2	12	65	1560
Traffic/Beach Safety Monitors	2	12	65	1560
Equipment:	Total Estimated Equipment Hours:			
Excavators - CAT 329 - 228 HP			600	
Bulldozer - CAT D9 - 448 HP			370	
Front End Loader (Wheel Loader) CAT 992 - 907 HP			310	
Crawler Crane - 285 HP			430	
Pre-Decommissioning Debris Survey				
Manpower:	Qty.	Hours:	Days:	Total Hours:
Project Manager	1	12	4	48
Environmental Monitor	1	12	4	48
Marine Surveyor/Survey Boat Captain	1	12	4	48
Marine Surveyor Technician	2	12	4	96
Equipment:	Total Estimated Equipment Hours:			
Survey Boat - main engine - 298HP			48	
Post-Decommissioning Debris Survey				
Manpower:	Qty.	Hours:	Days:	Total Hours:
Project Manager	1	12	4	48
Environmental Monitor	1	12	4	48
Marine Surveyor/Survey Boat Captain	1	12	4	48
Marine Surveyor Technician	2	12	4	96
Equipment:	Total Estimated Equipment Hours:			
Survey Boat - main engine - 298HP			48	

Table 2-1 Manpower and Equipment Estimates by Activity (continued)

Surf Zone Segment Decommissioning Activities				
Manpower:	Qty.	Hours:	Days:	Total Hours:
Project Manager	1	12	39	468
Onshore - Environmental Monitor	1	12	39	468
Onshore - Superintendent	1	12	39	468
Onshore Heavy Equipment Operators	3	12	39	1404
Onshore - Welders	2	12	39	936
Onshore - Divers	2	12	39	936
Onshore - Hazardous Materials Crew	4	12	39	1872
Onshore - Riggers/Roustabouts	2	12	39	936
Onshore - Laborers	2	12	39	936
Onshore - Traffic Safety Monitors	2	12	39	936
Onshore - Beach Safety Monitors	2	12	39	936
Offshore - Barge Superintendent	1	12	39	468
Offshore - Marine Surveyor	1	12	39	468
Offshore - Crane Operator	1	12	39	468
Offshore - Winch Operator	1	12	39	468
Offshore - Welders	3	12	39	1404
Offshore - Divers	5	12	39	2340
Offshore - Hazardous Materials Crew	2	12	39	936
Offshore - Riggers/Deckhands	4	12	39	1872
Offshore - Tugboat Crew	4	24	39	3744
Offshore - Crewboat Crew	2	12	39	936
Equipment:	Total Estimated Equipment Hours:			
Onshore - Excavators - CAT 329 - 228 HP	160			
Onshore - Bulldozer - CAT D9 - 448 HP	80			
Onshore - Front End Loader (Wheel Loader) CAT 992 - 907 HP	40			
Onshore - Crawler Crane - 285 HP	40			
Onshore - 325 Diver's Air Compressor - Diesel 10 HP	80			
Onshore - Diesel Driven Light Plants - 14 HP	80			
Offshore - Derrick Barge - Generator 150KW - 275 HP	480			
Offshore - Derrick Barge - Crane - 285 HP	340			
Offshore - Derrick Barge Anchor Winches - RB90 238 HP	95			
Offshore - Derrick Barge Pull Winch DTW150 318 HP	100			
Offshore - Tugboat #1 - Mains - CAT 3508 - 1,150 HP	320			
Offshore - Tugboat #1 - Generator - 30 KW - 113 HP	480			
Offshore - Tugboat #2 - Mains - CAT 3508 - 1,150 HP	120			
Offshore - Tugboat #2 - Generator - 30 KW - 113 HP	180			
Offshore - Crew Boat - Mains - Detroit S60 - 450 HP	160			
Offshore - Crew Boat - Generator - 30 KW - 113 HP	480			

Table 2-1 Manpower and Equipment Estimates by Activity (continued)

Equipment:		Total Estimated Equipment Hours:			
Offshore - Air Compressor - Sullair 1300 CFM - CAT C-15 540 HP					60
Offshore - Welding Machine - 400 AMP - 33 HP					270
Offshore - Jet Pump - XH150/CAT 3406 - 465 HP					120
Offshore - Industrial Air Compressor - 185 CFM - 48 HP					80
Offshore - 5120 Divers Air Compressor - Diesel 38 HP					380
Offshore Segment Decommissioning Activities					
Manpower:		Qty.	Hours:	Days:	Total Hours:
Project Manager		1	12	110	1320
Offshore - Barge Superintendent		1	12	110	1320
Offshore - Marine Surveyor		1	12	110	1320
Offshore - Crane Operator		1	12	110	1320
Offshore - Winch Operator		1	12	110	1320
Offshore - Welders		3	12	110	3960
Offshore - Divers		5	12	110	6600
Offshore - Hazardous Materials Crew		2	12	110	2640
Offshore - Riggers/Deckhands		4	12	110	5280
Offshore - Tugboat Crew		4	24	110	10560
Offshore - Crewboat Crew		2	12	110	2640
Equipment:		Total Estimated Equipment Hours:			
Offshore - Derrick Barge - Generator 150KW - 275 HP					1320
Offshore - Derrick Barge - Crane - 285 HP					860
Offshore - Derrick Barge Anchor Winches - RB90 238 HP					500
Offshore - Derrick Barge Pull Winch DTW150 318 HP					810
Offshore - Tugboat #1 - Mains - CAT 3508 - 1,150 HP					880
Offshore - Tugboat #1 - Generator - 30 KW - 113 HP					1320
Offshore - Tugboat #2 - Mains - CAT 3508 - 1,150 HP					840
Offshore - Tugboat #2 - Generator - 30 KW - 113 HP					1260
Offshore - Crew Boat - Mains - Detroit S60 - 450 HP					440
Offshore - Crew Boat - Generator - 30 KW - 113 HP					1320
Offshore - Welding Machine - 400 AMP - 33 HP					390
Offshore - Jet Pump - XH150/CAT 3406 - 465 HP					460
Offshore - Industrial Air Compressor - 375 CFM - 142 HP					175
Offshore - 5120 Divers Air Compressor - Diesel 38 HP					1090